



(916) 362-7962 Kyle Yamashiro, PT, CSCS (916)362-7963 fax
PT Consultant for Sacramento Rivercats, Oakland A's, and Sacramento State Athletics

PRP – Knee

Healing Process:

Post -Injection 1-10 days: Gap is filled with wbc's and PRP is activating to prepare for cross bridging.

Protection Phase Week 1-Week 3: Allow the initiation of cross-bridging and filling the gap with the prp

Light Activity Phase: Week 2-5: Collagen synthesis and aligns in the longitudinal axis, initiating tensile strength

Return to Activity: Week 3 - 3 months: Collagen increasing tensile strength and elasticity

Patient Response:

Day 1 and 2: painful in the joint

Day 3-6: Diminishing pain and improving significantly

Day 7: Sometimes no pain at all, improved quality of ROM

***Therefore, pain is not an indicator of the healing process!!!**

Goals:

- Allow the PRP to absorb at the location (7-10 days)
- Muscle belly 3-4 weeks (interval return to sport program begins)
- Tendonosis 6-8 weeks (interval return to sport program begins)
- Ligaments 8-10 weeks: MCL/ LCL avoid valgus/ varus stress x 6 weeks!! (interval return to sport program begins),

RANGE OF MOTION AND WEIGHT BEARING

- **Week 1:** Begin PROM only for PT only in the first week.
PWB/NWB
- **Week 2:** Begin low level closed chain activity.
Walking only, Remove immobilizer, No squats or lunges
- **Week 3 and 4:** AAROM should get 90% of ROM without stretching by end of week 2
Initiate trot or light jogging activities (not long duration) <15 minutes
- **Week 4:** Begin gentle stretching **Begin squats and lunges**
Initiate jog, stride and light run straight planes...no deceleration
- **Week 5-6:** Begin Stretching of muscles
Initiate jump progression, cutting activities, sprints, change of direction

STRENGTH: All pathologies must go through week 1 and 2. Weeks 3 and so on.... can be modified depending on the above pathologies and sport related in season vs post season. This schedule is optimal for tissue healing.

- **Week 1-2:** no strengthening, no activity, no modalities, Gentle PROM only Towel slides to 90
- **Week 2:** begin PROM and AAROM exercises within pain free range (no stretching).
Level 1 exercises: SLR's, bridging, planks, heel raises, form run @ walk pace. Selective dynamic warm-Up. Begin straight leg closed chain exercises on stable surface only
- **Week 2- 3:** Initiate Leg press or assisted squat and lunge, Dynamic warm-up, Form run @ trot to jog pace ladder @ jog pace. Resisted walk outs -all directions. Begin Bike for cardio
- **Week 3-5:** Begin Squat and lunges, Controlled and low intensity (in place) return to sport drills. Progressive 40-60 yards (jog, and stride) . Begin elliptical for cardio
- **Week 4-7:** Begin Jump Progression, Increase speed of agility, change direction, Jogging for cardio
- **Week 5-10:** Begin sprinting and Return to sport activities 50-75%. Effort
- **Week 6-12:** Return to competition

******Overlap of timelines in based on the patient's condition and severity of injury******